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CARNEGIE

MAGAZINE

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VOLUME XIX

PITTSBURGH, PA., APRIL 1945

NUMBER 1



FLIGHT'S END BY GEORGES SCHREIBER

Abbott Collection of Naval Aviation Paintings

(See Page 12)

CARNEGIE MAGAZINE

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VOLUME XIX

NUMBER 1

APRIL 1945

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On April 23 for many years it was the custom of the late Samuel Harden Church, President of Carnegie Institute from 1914 until his death October 11, 1943, to commemorate the birthday of William Shakespeare with a ceremony held outside the entrance of Carnegie Music Hall.

The bronze seated statue of the Bard of Avon which, together with figures of Bach, Galileo, and Michael Angelo, the work of the late J. Massey Rhind, adorns the Forbes Street facade of the Institute, was the central figure for the ceremony. Carnegie Tech Drama School students in Elizabethan costume customarily decorated the statue with a floral wreath and read an ode composed by Mr. Church which is here given.

ODE TO SHAKESPEARE

O Shakespeare! On this joyous natal day
We come with garland crown to own thy sway.
Thou art not dead—thou canst not ever die—
Thy mighty spirit, ranging earth and sky,
And seeking life eternal for its part,
Attains its heaven in the human heart.
Around the world we hear thy great voice roll—
Thy song the fitful passions of the soul.

The years fly past, the ages fall behind,
Yet still is thine the empire of the mind;
For like a god that would his race endower,
Thou sittest there in majesty and power.
Then come we here, the happy mission ours
To hail thy name and gird thy brow with flowers.
O Shakespeare! Give thy listening ear to me!
My flowers—and my heart—I give to thee!

—SAMUEL HARDEN CHURCH

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CARNEGIE INSTITUTE
4400 Forbes Street

Hours: 10:00 A.M. to 6:00 P.M., weekdays
2:00 to 6:00 P.M., Sundays

FINE ARTS GALLERIES

APRIL 15—MAY 27, 1945
Abbott Collection of Naval Aviation Paintings
APRIL 19—MAY 31
Exhibition of Paintings by Esther Topp Edmonds
APRIL 26—JUNE 1
Thomas Eakins Centennial Exhibition
MAY 13—JUNE 3
18th Annual National Exhibition of Arts and Crafts by High-School Students, auspices of Scholastic Magazines.

•••

Founder's Day this year will be celebrated on October 11. The exhibition, "Painting in the United States, 1945," will open that evening and will continue through December 9.

MUSEUM

The annual Nature Contest will be held Saturday, May 12, with elementary-school boys and girls meeting to identify specimens in the morning and high-school students in the afternoon.

•••

The South Pacific and Asiatic exhibition continues with its display of pictorial maps, dioramas, flora and fauna of that area.

LIBRARY

Hours: 9:00 A.M. to 10:00 P.M., weekdays
2:00 to 6:00 P.M., Sundays

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Carnegie Library School will award several scholarships of \$300 each for next year to graduates of colleges outside of Pittsburgh and several of \$180 each to graduates of local colleges.

Application should be made before June 1 to Frances H. Kelly, Associate Director, Carnegie Library School.

MUSIC HALL

Free organ recitals are given by Marshall Bidwell every Saturday evening at 8:15 o'clock and every Sunday afternoon at 4:00 o'clock, from October through June.

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The Carnegie Institute, in the broadest sense, holds its possessions in trust for mankind and for the constant welfare and happiness of the race. Anyone, therefore, who by a gift of beautiful works of art, or objects of scientific value, or a donation to its financial resources, aids in the growth of these collections and the extension of its service is contributing substantially to the glorious mission of the Institute.

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ENCOURAGING CREATIVE YOUTH

BY FRIEDA S. CURTIS

National Secretary, Scholastic Awards

"THE Scholastic exhibition is, to my mind, a true festival of spring on the green pastures and flowering meadows of American art. It voices the artistic aspirations and the creative urge of the youth of this country. . . . It never fails to capture and reflect the scintillating sparks of youthful imagination." This opinion, by Dr. Andrey Avinoff, Director of Carnegie Museum, of the annual high-school art exhibition sponsored by Scholastic Magazines, was echoed by all the judges who made the selections and awarded the prizes in this year's judging held during the middle of April in Carnegie Institute.

That artists and art educators of national eminence would travel hundreds of miles and would spend many precious hours in serious consideration of the art work of high-school students is evidence in itself that this great nationwide youth art movement has profound significance. The vast amount of energy, enthusiasm, money, and time that are contributed each year to the preparation of the entries; their display first in regional exhibitions and later in the national exhibition at Carnegie Institute; and the rewards, amounting to many thousands of dollars, received by students for their work are added signs of the importance of the project.

On May 13, the 18th annual Scholastic Art Exhibition will open in the Fine Arts Galleries. Approximately 1,500 pieces of art work, ranging from oils and water colors through colored

and black inks, prints, sculpture, ceramics, and the crafts, will be on display. Every section of the nation, as well as Hawaii, will be represented; and work done by students from twelve years of age through eighteen and nineteen will be exhibited.

It is only by a real understanding of all the factors back of the final exhibition that the true meaning of this movement can be understood. It is a truly democratic art movement in which every high-school art student in the country may participate. With the enthusiastic consent of school superintendents and other officials, the art teachers in public and parochial schools encourage their pupils to do the type of work that interests them for the Scholastic Art Awards, and they also submit the best work chosen from regular classroom exercises. The directors of art education in all localities lend their support, and those living in the cities where regional Scholastic Art Exhibitions are to be



SCULPTURE BY ALDO PITASSI

North Catholic High School, Pittsburgh



WATER COLOR BY MOZELLE THOMPSON
Peabody High School, Pittsburgh

held devote long and tedious hours to the work of planning and arranging such exhibitions. This active participation by all school people is the basic factor in the success of the movement.

Without the equally enthusiastic help of another distinct group, however, the present great scope of the Art Awards could never have been attained. To the far-seeing policies of certain commercial enterprises should go credit for implementing this competition so as to make its opportunities available to many more students than could otherwise have been possible. When the sheer burden of handling the entries at Carnegie Institute became too great and when many art educators were asking for exhibitions in their own localities to stimulate their pupils and raise the standards of art instruction, a group of department and other stores joined Scholastic Magazines in extending this work into almost every part of the country. This program of regional exhibitions, already well-established in the Far West, Middle West, and East, has been extended during the past year for the first time into the deep South. In addition to Virginia and Tennessee,

300,000 persons attended the regional exhibitions.

"Over \$7,000 in Prizes! 56 Art School Scholarships!" was the caption heading many of the announcements during the year concerning Scholastic Art Awards. Back of that promise lies the

which have had their shows for the second year, six southern states participated: Alabama, Georgia, Florida, Louisiana, North Carolina, and South Carolina.

In the regions, juries of local artists select the pieces that are to be sent to Carnegie Institute for the final judging and award the Achievement Keys constituting the regional prizes. This year approximately



PENCIL SKETCH BY JOHN CLAGUE
John Hay High School, Cleveland



FABRIC DESIGN BY RICHARD EAFF
Cass Technical High School, Detroit

faithful and continued support of two other interested groups: the commercial companies, who with Scholastic Magazines provide the money prizes, and art schools from California to Massachusetts and from Texas to Michigan, which year after year offer full-tuition scholarships to the high-school seniors submitting the most promising portfolios. The scholarships are, of course, the most important prizes both in money and honor value. Carnegie Institute of Technology was one of the first to provide such scholarships, and the list of forty-seven schools which together gave fifty-six scholarships this year includes a

large number of the major art schools of the nation. In accordance with the considered opinion of most educators, the money prizes for individual pieces are never excessive, but by the time prizes and honorable mentions have been given in all nineteen classifications of the competition, a handsome sum of money has been distributed.

All this activity would be without profound meaning, however, if it were not guided into the noblest artistic channels. Herein lie the function and the privilege of the juries. As Virginia Murphy, director of art education, New York city schools, said in expressing her views and those of her associates: "Scholastic Art Awards juries set the standards for art education throughout the nation each year. Their selections carry a message to every art teacher in the country concerning both the technical and the creative standards by which the work has been judged."

This places a great responsibility upon the judges, a responsibility to which the jury this year, and all past juries, responded with the greatest seriousness. During five days, each



OIL BY MORTON SCHWARTZ
English High School, Lynn



PICTORIAL ARTS JURY FOR SCHOLASTIC AWARDS

Seated, left to right: CLAYTON STAPLES, REGINALD MARSH, C. VALENTINE KIRBY, JAMES CHAPIN, WILLIAM GROPPER, GLENN PRICE.

Standing: MAURICE R. ROBINSON, JAMES BOUDREAU.

crowded with hard and exacting work, men and women, well-known because of their own high achievements, selected the pieces to be hung and made the prize awards. The scholarship jury worked first, considering in all about 250 portfolios out of which they selected the 56 winners and as many alternates. Wilfred A. Read, head, Department of Fine Arts, Carnegie Institute of Technology, Royal Bailey Farnum, vice president of the Rhode Island School of Design, both of whom have given their services in this capacity for many years, and Raymond Dowden, professor of design at Cooper Union, served on this jury.

The Pictorial Arts jury who made their selections from about 10,000 pieces included Reginald Marsh; James Chapin; William Gropper; Clayton Staples, head of the art department, University of Wichita; Glenn Price, art director of the *Encyclopaedia Britannica*; James Boudreau, dean of Pratt Institute; and C. Valentine Kirby, director of art,

State of Pennsylvania, who has served every year since the beginning of the Awards.

Others who were on the several special juries are: Harry Jacobs, director of art, Buffalo Public Schools; Mary Adeline McKibben, senior supervisor of art, Pittsburgh Public Schools; Edward Warwick, director of the Philadelphia Museum School of Industrial Art; Emmy Zweybruck, textile designer; C. B. Neblette, Rochester Institute of Technology; Roy Stryker, photographer; Cy Hungerford, cartoonist; Walter Nield, art director, Young & Rubicam; Martha McDowell, assistant editor of *Mademoiselle*; Frederic Clayter; H. M. McCulley; Paul S. Graham, Westinghouse Electric Corporation.

As co-ordinator of the activities of these many groups and individuals working for the cause of art education in America, Scholastic Magazines carry out the dream of the publisher Maurice R. Robinson.

"WATER, WATER EVERYWHERE"

By STANLEY TRUMAN BROOKS

Curator of Invertebrate Zoology, Carnegie Museum



WATER is the greatest solvent known to man and an element without which no living thing can exist; every living cell of all living material exists and functions only in its medium of water.

The largest and smallest forms of life live in water—the whale and the bacterium. Man's first home was the waterside and today nearly all roads of industry and pleasure lead to water. When water becomes polluted, life itself is threatened.

The streams and rivers, brooks and rills, were nature's channels to carry off the overflow from the land before man came to pour his industrial pollution into the water. Into these first open sewers ran the excess waters from the hills and mountains, plains and valleys, that had fallen as rain and snow from the heavens. In these streams the field and forest rejectamenta, the leached-out chemical compounds and elements of the rocks and soil, were deposited. There, broken down by bacteria, the organic remains of earth's life were returned as minerals, as water, and as the gases of the air. In some areas the waters became turbid and murky with their load of silt and other wastes but, throughout all the earth, balances were struck. Plant life and animals existed in the environment they found agreeable to their demands.

In natural waters are many microscopic plants and animals. The plants containing chlorophyll form their own food in sunlight from water and carbon dioxide. The bacteria and other plants

obtain their food from the various disintegrative processes in nature.

The plants form the basis of life. Upon them the higher forms depend for their sustenance and their living. The protozoa, the one-celled animals, eat the plants, both the green forms and the bacteria. The protozoa are then eaten by the myriad worms, Crustacea, larvae of insects, and newly hatched fish. Upon these worms, Crustacea, and larvae depend the smaller fish. Then larger fish eat the larger larvae, the larger crustaceans, the small fish.

Thus life moves—or moved: bacteria, chlorophyll-bearing plants, Protozoa, worms, Crustacea, small fish, larger fish, birds, mammals, listed in the order of their taste for food. Man, in the end, ate the fish, the birds, and utilized the mammals. This was raw nature, the survival of the fittest.

Time passed and man became the most important pollutant the earth was ever to know. Through exploitation, reaping that which he did not sow, he tore Earth's treasures from her, enriching himself but creating a poverty of nature for his posterity.

Man today is being hurt grievously by nature's pollution, aggravated and inflamed with his own poisonous wastes. The delicate boilers of his many industrial plants cannot digest the limy waters of streams nor adjust themselves to the flow of acid. Man has opened the deep coal seams of the earth and has allowed the percolating waters and oxygen to bring more and more hardness and strong acids to his streams. His mills have belched forth their pickling fluids which etch all structures and consume even iron and steel.

Public awareness of what is happening is growing and legislation is slowly being formed to cope with it. Legisla-

tors, pulled hither and yon by conflicting interests, are nevertheless making stumbling progress in both state and federal assemblies. The people at large are becoming more conscious of their lost heritage and are making vociferous demands. Sportsmen, many of whom hide under the cloak of conservationists, demand that pollution stop so that the fish destroyed by industry can then be killed in more artful ways; it isn't the balance of nature they see, but the sport involved. Concessionaires want pollution stopped so that their interests in waterside places of gayety may more greatly profit. Other groups also speak from the platform of special privilege.

What does the general public want?

The public wants a glass of pure water. This it has, to a certain degree, as a result of the efficiency of the public water supply systems and their skilled engineers.

The public wants water that does not corrode brass and iron plumbing in home and factory. This it does not have and cannot have for some time to come.

The public does not want rivers which, according to the report on the Ohio River Pollution Survey published by the United States government, in 1944 cost a total of \$2,066,000 in damages to industrial and domestic water supplies, steamboats, barges, power plants, and river and harbor structures along the Ohio River and its tributaries within western Pennsylvania. The public does not want water laden with the sewage of city-dwelling millions as the source of its drinking water.

What can be done about these desires?

If some advice were followed, Pennsylvania, as the coal engineer says, would have to be "turned back to the Indians." Fortunately, surveys have shown that this radical change in our future will not be necessary.

Ninety per cent of the annual flow of 1,325,806 tons of one hundred per cent sulphuric acid down the Monon-

gahela and Allegheny rivers comes from coal mining operations. Thus, the major problem becomes control of mine and strip pit wastes.

There are three approaches to the problem.

In some rare instances, mine waste can be eliminated at the mine without too great a loss by neutralization of mine waters. However, if this were put into general operation it would cost the industry of the United States an initial \$330,000,000 for treatment plants plus an annual operating cost of \$180,000,000. Aside from expense the method has other drawbacks.

Stream flow control is another possibility. Under normal conditions of rainfall, streams neutralize some of their burden of acid. Unfortunately, and it has been known since 1909, the bulk of western Pennsylvania's streams are too heavily laden to be purified through flow alone. However, by the judicious use of dams already constructed for flood control, and by construction of those already authorized by Congress, the resultant flow control would greatly help to eliminate the present acid burden.

These two methods will have to be augmented by the sealing of abandoned mines. The diversion of surface water from mines and the exclusion of air reduces the oxidation of sulphur-bearing ores and the consequent production of sulphuric acid. Sealing of abandoned mines, authorities tell us, will exclude about 48 per cent of the total acid burden of the stream. This is a goodly percentage and a reduction which can be accomplished through a not too great outlay of capital by the mining industry. Sealing of mines for the entire industry, it is estimated, would cost an initial \$60,000,000 with an annual upkeep of about \$10,000,000.

Sealing of abandoned mines, stream flow control, and neutralization, in the order of their apparent importance, are the three available approaches to the elimination of the terrible conditions now existing in Pennsylvania streams.

"Ab, Sweet Mystery of Life!"



In the meantime, while the acid wastes of mines are being eliminated, the industries responsible for their 10 per cent of the acid burden in the water must develop new processes for utilizing waste acids. Research toward this end has been carried on in Mellon Institute for the past ten years and progress is being made. Today, pigments and other by-products come from these mill wastes. Further progress must be made in reducing acid wastes to harmless compounds or to marketable products before this pollution can be entirely eliminated.

Human waste and organic plant waste are not the least of the pollutants in our streams. These wastes, say public and health authorities, must be treated, at least given primary treatment, in order to reduce oxygen depletion in our streams. Nature can care for such wastes in a very efficient manner through her bacteria and enzymes but populous cities have overloaded the natural sewage disposal plant to such a degree that it is now a menace and not an aid.

Man cannot undo his damage easily. Industry with all its billions of wealth cannot return even one lowly snail now

extinct from the acids which devoured its shell home and prevented its eggs from hatching. A great fauna is already gone, extinct, and a flora has suffered setbacks, some temporary and some permanent.

Pessimistic as these statements appear, natural streams can be returned if we start now to work for true stream sanitation. Industry is awake and working. The chemists are producing valuable by-products from former wastes of its factories. The public is aware of the extravagance of allowing all organic human and industrial wastes, the richness of the nation's fields and forests, to float down the rivers only to enter a neighbor's water supply.

Man today is being hurt by his own pollution and he is feeling this hurt to the depths of his selfish soul. It is not for him to perish, however, if he can adapt himself or control his environment. With an awakening of public opinion and a recrudescence of personal responsibility to his fellow man he can, through the medium of science and engineering skill, make his own part of the earth a more agreeable, a more healthful and profitable place in which to live.

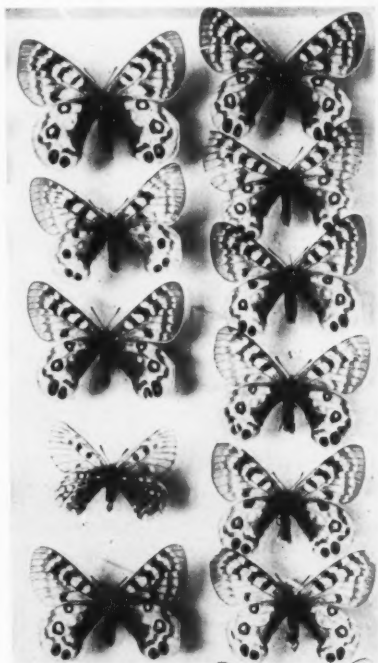
POSTWAR PLAN FOR SCIENCE MUSEUMS

CLOSER co-ordination of museum work in this country has been recommended by the American Association of Museums. A resolution drawn up last year by Dr. Andrey Avinoff, Director of the Carnegie Museum, by Dr. Arthur C. Parker, Director of the Historical Museum of Rochester, and Dr. Albert E. Parr, Director of the American Museum of Natural History, and adopted by the Association, outlines the following aims for museums of science in the United States, working together:

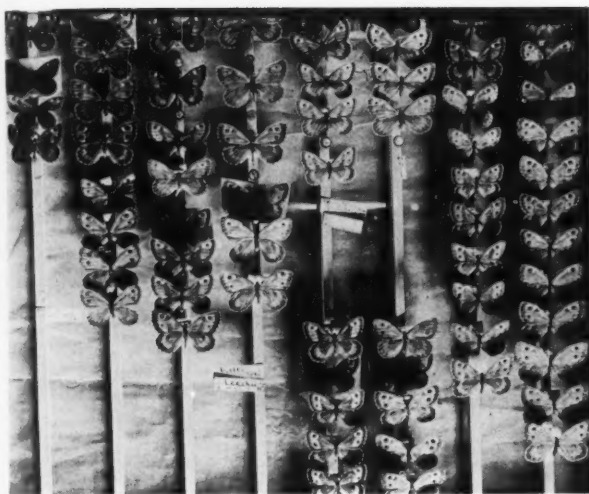
1. Observance of a proper balance of specialized and synoptic materials.
2. Maintenance of a working relationship between research in museum laboratories and interpretation in the galleries.
3. Recognition of the priority of certain institutions in regional and specialized fields.
4. Promotion of joint expeditions and the creation of special stations, biological and others.
5. Assistance in building up the experience and efficiency of the personnel and in promoting professional interests by exchange of services and employment aid.
6. Development of means for making available to museums needed duplicate material, models, standard charts, labels, and descriptive data on improved technical processes in preparation, exhibition, installation, and lighting.
7. Arrangement for inter-institutional loans of circulating exhibits.
8. Preparation of microphotographic records of especially valuable scientific documents, specimens, series, and whole portions of study collections.
9. Sponsorship in due time of closer international co-operation among museums.

The first two points call for the museum to provide the untrained onlooker with a bird's-eye view of the subject presented, that he may obtain a comprehensive, scientifically accurate understanding of it. In this way lies the sound and dignified popularization of museum material.

Items 3, 4, 6, and 7 stress the chief objective of the proposition, that is, to avoid duplication of effort by museums. So many exhibits, constructed at cost of considerable sagacity, time, and money, could be repeated in accessible replicas which other institutions could use. Models of fossils or enlarged constructions of minute forms might be made



PARNASSIUS WITH TYPES
Zoologisches Museum der Universität, Berlin



TRAY CONTAINING SEVERAL TYPES OF KARANASA

British Museum, London

available for museums of science as are replicas of statuary or sculpture.

Joint exhibitions held by two or more museums are another possibility, and also, jointly operated stations for specialized local research, such as the biological station of Barro Colorado in Panama.

A recognition among institutions of what might be called the scientific priority of a certain museum to carry on work in a specialized sphere would cut down overlapping. The Carnegie Museum, for instance, possesses the most outstanding collection of birds of Labrador and also the largest collection of Hawk Moths in the world. Other museums have their unique collections. It is only natural that such leadership should be recognized by other institutions and the way made clear for a centralized documentation.

Exchange of curators and specialists similar to the exchange of professorships in universities is also a practical economy. Such visiting authorities could easily straighten out a number of systematic questions.

The eighth recommendation calls for photographic records similar to the microfilms in libraries, for types, valuable series, and whole portions of study collections.

Shortly before World War II, when Dr. Avinoff visited London and Berlin during the International Congress of Entomology, he took color kodachrome photographs of thousands of specimens of Lepidoptera in the

museums in these two capitals. Devastating damage by bombs was inflicted on the British Museum and it may well be that Dr. Avinoff's kodachromes of Jamaican moths taken in Berlin are now the only available records to establish the identity of a number of species.

As chairman of a committee under the Institute of Intellectual Co-operation of the League of Nations, Dr. Avinoff in 1932 prepared resolutions of similar aspiration, revising and amplifying them in 1934. These were unanimously accepted by the Institute and since that time have been approved in part by annual meetings of the American Association, by international congresses of Entomology, and by several national organizations of this country, such as the Mammalogical, Ornithological, and Entomological Societies of America.

Altogether the recommendations adopted by the American Association comprise not a statement of formal obligations but rather an expression of a hope that may lead ultimately to a more extensive plan for the practical co-operation of museums of science.

THE ABBOTT COLLECTION - -

PAINTINGS OF NAVAL AVIATION

BY DOROTHY E. GLASSBURN

Department of Fine Arts, Carnegie Institute



ALTHOUGH the aviation branch of the Navy is a comparatively recent activity of that service, it occupies so important and dramatic a position and has developed so many different aspects so rapidly that it offers an

excellent field for pictorial interpretation.

The Abbott Collection of Paintings of Naval Aviation, on view at Carnegie Institute through May 27, contains one hundred and one oils, water colors, drawings, and sketches by seven Ameri-

can artists. These artists were commissioned by the Abbott Laboratories to make the paintings, and the Collection was then turned over to the Navy.

The artists are Howard Baer, Robert Benney, Adolf Dehn, Don Freeman, Joseph Hirsch, Georges Schreiber, and Lawrence Beall Smith. They visited Naval Air Stations in every part of the country, covering all phases of the program, except combat flying, from pre-flight school up to combat training, with fliers and ground crews, pilots, enlisted men, and waves.

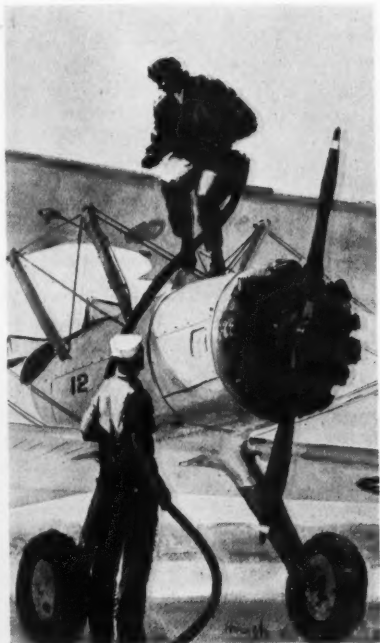
The paintings and sketches by Don Freeman show the aviation cadet getting pre-flight training. "Ground Loop," "Get Tough!" and "Over the Side" demonstrate the preliminary course.

Both Joseph Hirsch and Georges



THE KILL BY ROBERT BENNEY

Schreiber were assigned the flier's primary and intermediate training and they have described it in oil, water color, and pencil. Hirsch's "Food for the 'Yellow Peril'" shows the student with his primary training plane; Schreiber's "The 'Up-Check'", the fateful moment the instructor approves the student's performance; and the latter's "Flight's End," the calm assurance of the trained pilot. "Bomber Face Lifting" by Hirsch pays tribute to the

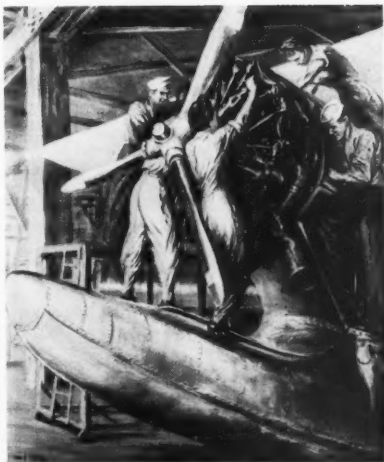


FOOD FOR THE "YELLOW PERIL"

By JOSEPH HIRSCH

ground and deck crews and Schreiber's "The Man in the Rear Seat" portrays the grim task of the gunner.

For his work, Lawrence Beall Smith joined an airplane carrier. "Task Force Hornets" and "Coming Aboard" give wide views of activities on the flight deck. In "A Language All Their Own" and "To the Attack!" signalmen leaning against the wind become



A WOMAN'S TASK BY HOWARD BAER

almost as graceful as ballet dancers.

The culmination of the entire naval aviation training program—combat operations—is pictured in four oils by Robert Benney: the sinking of a submarine by a plane in "The Kill," the destruction of a Japanese carrier in "Death of the Shoho," an attack upon an enemy cruiser in "The Battle of Midway," and the dive-bombing of a battleship in "Naval Air Might at Santa Cruz."

To Howard Baer went the task of showing the waves in aviation, not in training but doing jobs from which they have released men to fight, as "A Woman's Task."

The lighter-than-air service was the field to which Adolf Dehn devoted himself, with a number of striking water colors of blimps and balloons by day and by night as the result. His medium seems especially appropriate for portraying the grace and agility of these huge craft once their bulks are earthfree.

Vice Admiral J. L. McCain, of the United States Navy, has commented: "The artists have caught the spirit of the men who fly and maintain Navy's planes. They have, in short, captured the essence of Naval Aviation."

YOUNG VETERANS ON TECH CAMPUS

BY WILLIAM R. WORK

Head, Veterans Center, Carnegie Institute of Technology



YOUNG veterans of World War II have enrolled for study at Carnegie Institute of Technology under the provisions of the GI Bill of Rights, to the number of fifty-one. The group is constantly increasing

as additional men and women are discharged from the Armed Forces and make their new contacts with civilian life by resuming college training that was interrupted or never started because of their induction.

It is gratifying to be able to report that the problems of readjustment have been greatly overemphasized. Experience of the college faculty with the returning veterans leads to the belief that they will be rapidly and easily assimilated into the general student body as normal, serious, and valuable additions. The policy of the Tech Veterans Center is based upon this belief because the service men and women, quite simply, want it that way.

The Veterans Center, 254 Administration Hall, co-ordinates all matters relating to veterans as students. Applicants are interviewed and guided through the admission procedure which includes the placement test regularly given all incoming students. The Center is also the point of contact between Carnegie Institute of Technology and the Pittsburgh regional office of the Veterans Administration, located at 1001 Liberty Avenue under direction of K. S. Covey.

Carnegie Tech is serving veterans of World War II who are eligible for

educational benefits provided by the government under two acts passed by the Seventy-eighth Congress, the Servicemen's Readjustment Act of 1944, or Public Law 346, popularly known as the GI Bill of Rights, and Public Law 16 which applies to veterans who, because of disability, are eligible for pension.

The GI Bill of Rights applies to any veteran, man or woman, who holds a discharge other than dishonorable and who had at least ninety days of active military or naval service, some or all of which was in the period since September 16, 1940, and prior to the end of the present war.

A veteran who entered the service before he became twenty-five years of age is deemed to have had his education or training "impeded, delayed, interrupted, or interfered with." Any such eligible person is entitled to education or training, or a refresher or retraining course at an approved educational institution. The period taken as base for reckoning is twelve months, plus an additional period equal to the time the veteran was in active service, reduced by the amount of time spent in the Army Specialized Training Program or the Navy College Training Program or as a cadet or midshipman at one of the service academies. The total period of education or training may not exceed four years.

An eligible veteran who entered the service after he became twenty-five years of age is entitled to education or training for a period of twelve months under the same conditions which apply to the younger men but he may not be granted more time unless he can show that his education was interrupted.

Benefits to the veteran under the GI



COURTESY POST-GAZETTE

MEMORIAL SERVICES HONORING THE LATE PRESIDENT FRANKLIN DELANO ROOSEVELT WERE HELD BY CARNEGIE TECH STUDENTS ON APRIL 13, THE DAY AFTER HIS DEATH

Bill of Rights are of two kinds, college expenses and subsistence. College tuition, necessary textbooks, and supplies are paid for by the government to the school up to a maximum of \$500 for an ordinary school year of two semesters. The textbooks become the property of the veteran unless he withdraws from a course before the end of a semester. A subsistence allowance of \$50 per month is paid by the government to the veteran while he is attending school. This allowance is increased to \$75 per month if the veteran is married or has a dependent.

To be admitted to Carnegie Institute of Technology, a veteran must meet the established entrance requirements and demonstrate that he is qualified to undertake the course of study chosen by him. While he is a student he must maintain a satisfactory scholastic record according to the regularly prescribed standards and practices of the institution.

Public Law 16 is applicable to veterans who have a pensionable disability and are in need of vocational rehabilitation.

tion. The main features of the educational benefits under this law are the same as the GI Bill of Rights except that the length of time in the service is not a factor in determining the period of education or training to which the veteran is entitled and also the monthly pension is greater than the subsistence allowance. As much as four years, but no more, is allowed to accomplish the aim of the law, vocational rehabilitation.

TECH COMMENCEMENT

Dr. Rufus Henry Fitzgerald, Chancellor-Elect of the University of Pittsburgh, spoke on "Order Out of Confusion" at the 42d commencement of Carnegie Institute of Technology at 3:00 P.M., Sunday, April 29, in Carnegie Music Hall. Nearly 200 students were graduated.

"Looking Back and Looking Forward" was the subject of the address by Dr. Erdman Harris, Headmaster of Shady Side Academy, Pittsburgh, at the baccalaureate exercises on April 28 at 8:00 P.M., in Music Hall.

CARNEGIE MUSEUM TRIPS

HUDSON BAY

W. E. CLYDE TODD, Curator Emeritus of Ornithology and leader of the expedition, and J. Kenneth Douth, Curator of Mammalogy, left for Hudson Bay on March 18. They traveled by rail from Pittsburgh to Mooseeonee, Ontario, where they met their cook and guide, Paul Commanda, and then took off by plane for Povungnetuk, a Hudson's Bay Company Post on the east coast of Hudson Bay. At Povungnetuk the men hope to pick up a few more guides and cross the Ungava Peninsula by canoe and outboard motor. They expect to return to Pittsburgh in the early part of September.

Ungava, now called Northern or New Quebec, is one of the regions which have been selected by the Carnegie Museum for special study and to that end twenty-one separate expeditions have gone into this country between 1901 and 1942. This is Mr. Todd's seventeenth trip into the Hudson Bay country and Mr. Douth's fifth. John B. Semple and George H. Clapp, trustees of the Carnegie Institute, have to a considerable extent underwritten the expedition.

The region which the party proposes to explore this year has never been visited by a biologist and is, therefore, biologically unknown. It lies between Hudson Bay and Ungava Bay along the 60th parallel and is, for the most part, unmapped. Thus, any information whatsoever about the country may be of great interest to cartographers as well as biologists. It is hoped that a complete photographic record of the trip can be made. Mr. Todd is particularly anxious to know what birds, if any, nest in that area of the Ungava peninsula.

The results of this expedition and all other trips to the Hudson Bay region will be published eventually in the interest of science.

ARIZONA

Arthur C. Twomey, Associate Curator of Ornithology, is at the present time collecting specimens in Arizona on the borderland of Mexico, a section of the country in which the Museum is greatly interested since the birds of this area, known as a part of the Sonoran region, are found both within the limits of the United States and of Mexico.

Although Dr. Twomey was disappointed in being unable to go into Mexico this spring because of the sudden and serious illness en route of Ottmar F. von Fuehrer, the Museum artist who was to accompany him, he will use this opportunity to study the forms of bird life of the territory mentioned and to obtain examples of other living forms, plants, and shells. In this project Dr. Matthew T. Mellon has manifested a special interest.

BRITISH COLUMBIA

Late in May, Arthur C. Twomey will proceed to Alberta and British Columbia to establish a base camp in the latter as headquarters for conducting his biological reconnoitering and explorations of the adjacent localities. He will be joined subsequently by Thomas A. Mellon, the generous sponsor of this project and of a preliminary expedition there in 1944.

While Dr. Twomey will be engaged chiefly in continuing the Museum's biological survey of the northwest country and in obtaining a set of the particular species of both migratory and nonmigratory birds of British Columbia listed in the desiderata of the Museum, it is believed that most promising results will be forthcoming as regards specimens of big game and smaller mammals, insects, and other forms of life.

SUPPLEMENTING THE SCIENCE CLASS

By JANE A. WHITE

Assistant Curator, Section of Education, Carnegie Museum



THE school children of this district are given an interpretation of the world of nature around them by the Carnegie Museum's modern program, sponsored by the Board of Public Education of Pittsburgh.

At the present time, fifth- and seventh-grade boys and girls are at the Institute every afternoon between 1:30 and 3:00 o'clock. The classes began coming in January and will finish in June. The sixth and eighth grades will begin in September, continuing until January. Thus every child in the fifth, sixth, seventh, and eighth grades of the city schools will have paid at least one visit to the Carnegie Museum.

The fifth-graders are given an orientation tour of the Museum. The sixth-grade children have a choice of studying plants or animals from the point of view of friend or foe in the garden. The seventh grade may choose from the Pacific War Area, Paleontology, Early Civilization, or Mineralogy. The curriculum for the eighth grade is still in the formative stage. Probable subjects are Taxidermy, Habitat Backgrounds and Specimens, or Habitat Adaptations.

By June, nearly 25,000 children will have had Museum instruction during this year, including the recently added fifth-graders. The instructors of the science classes—docents, as they are called—are all honor students in Biology at the University of Pittsburgh.

Before 1937 only eighth-grade classes visited Carnegie Institute for instruction, each class making three visits of

two-hour duration. The only subjects attempted then were Birds, Botany, and Mammals, no one of which was directly correlated with the curriculum of the schools.

In February of 1937, arrangements were made for the sixth and seventh grades to visit the Museum, as well as the eighth, each grade making but one visit of an hour and a half duration. The sixth grade was taught Botany; the seventh, Vertebrate Paleontology; and the eighth, Food, Shelter, and Clothing—all of which directly supplemented the regular work of the schools.

In the fall of 1940 a new plan for the science classes was introduced by the Museum. A list of "Elective Topics" was sent to the science teachers of the Pittsburgh Public Schools, presenting the science exhibits at Carnegie Mu-



TYRANNOSAURUS REX LORDS IT OVER
THE HOLMES SCHOOL SEVENTH GRADE



PARK PLACE SCHOOL FIFTH-GRADERS STUDY THE SOUTH PACIFIC WALL MAP

seum which might fit into the classroom program. This allowed the teachers to choose the subjects of most interest to their students. Proving to be a satisfactory procedure, this has been followed for the past five years.

This year Dr. E. A. Dimmick, Associate Superintendent of the Board of Education, called a general meeting of public-school science teachers, art teachers, and staff members of the Fine Arts Department and Museum of Carnegie Institute. As a result of this meeting, Dr. Dimmick and Mr. H. G. Masters, Director of the Department of Elementary Education, asked teachers to report on the visits made by their art and science classes to the Instituté. A compilation was made by a committee consisting of five art and five science teachers working with the Departments of Art and Elementary Education of the Public School Board, and the Sections of Education of Carnegie Institute. The final report, prepared by Dr. Dimmick and Dr. G. D. Whitney, Associate Superintendents, is available at the Board of Public Education of Pittsburgh.

On the basis of such reports, and from comments which the teachers are asked to make to the Carnegie Institute staff and to the Board of Education, the pro-

gram at the Museum is being revised and improved.

The visit to Carnegie Museum is a highlight in schoolroom circles. Special streetcars are chartered by the Board of Education, which somehow adds to the adventure of the trip. The classroom teacher, of course, accompanies the children. From the questions the children ask at the Museum, their enthusiasm can be adequately judged and it is not at all uncommon for them to return afterwards, bringing parents and friends. The visit adds immeasurably to the child's fund of knowledge, both from what he sees and from what he hears. It acquaints him with the cultural offerings of the city and vastly enriches his classroom experience.

Pittsburgh is fortunate in having progressive educators, a group that is open-minded to the educational opportunities offered by the Museum and ready to co-operate with the Museum staff.

* * *

The preceding article describes the science program offered public school children by the Carnegie Museum. In the May issue of *CARNEGIE MAGAZINE*, the educational program of the Department of Fine Arts of Carnegie Institute will be discussed.

PRESENTING ESTHER TOPP EDMONDS



BOY IN WHITE ELOUSE

AN exhibition of paintings by a contemporary artist of western Pennsylvania is the annual custom at Carnegie Institute, inaugurated eleven years ago. Last year the series was interrupted but this spring the show is given over to paintings by Esther Topp Edmonds. There are thirty-six canvases in the exhibition which was installed April 19 in Gallery I, third floor, and will continue through May 31.

The theory of the show is to honor in his own community an artist to whom, through achievement, honor is due and to give a full-length portrait of his work that the public may see it in one place at one time and thus observe its evolution.

Esther Topp Edmonds

was born in Pittsburgh, in this community has lived and worked. She was graduated with honors from the College of Fine Arts, Carnegie Institute of Technology in 1918 and the following year was granted a two-year fellowship in the College of Fine Arts. In 1921 she joined the teaching staff in the Department of Painting and Design, and is now an Associate Professor in that Department. She has traveled and painted in Norway, the native land of her parents, and has studied in New York, Provincetown, and Paris.

Mrs. Edmonds has shown in practically every exhibition of the Associated Artists of Pittsburgh since 1921. She has been represented in all the exhibitions of Selected Artists of Pittsburgh held each summer by the Carnegie Institute. She was invited to show a painting in the 1933 International and in Painting in the United States, 1944. In the 1923 exhibition of the Associated Artists of Pittsburgh her painting "Alphild" was given Second Honor and in the 1924 exhibition "Portrait—Mrs. Menton" was awarded First Prize. In



SPRING MORNING



STORM CLOUDS

the 1926 show "Portrait" was given the Alumnae Prize of the Pittsburgh School of Design. In the 1929 exhibition her painting "Lilies" received the A. W. Smith, Jr. Prize for a floral subject, and in 1930 she was awarded the Art Society of Pittsburgh Prize for Figure or Portrait for "Beatrice Rober" which is in the show under the title "Bea." She has three canvases in the One Hundred Friends of Pittsburgh Art Collection presented to the Board of Public Education, one of which, "Eleanor," is included in this exhibition.

Chronologically the show begins with the painting "Eleanor," done in 1921, and ends with four canvases, "Dancers," "Spring Morning," "Bouquet of Flowers," and "Little Ballet Dancer," all of which were painted in the early months of 1945. Perhaps the best way to study the evolution of the work of the artist is to compare "Eleanor" with "Woman in Red Blouse," done in 1944. Or better still, the comparison might be made between two flower pieces: the one, "Spring Flowers," painted in 1927, and the other, "Bouquet of Flowers," done in

1945. The earlier pictures are in the academic tradition—elaborate, tonal and romantic. The outstanding characteristics of the more recent paintings are simplification, emphasis on pattern and outline, design and drawing.

Mrs. Edmonds is a versatile artist and she is thus very properly represented by landscapes, figures, portraits, and flower paintings. Her landscapes

are of Norway, the New England coast, and the Somerset countryside. They reach back and back, and unfold with a great sweep.

As a portrait painter Mrs. Edmonds is at her best and happiest when a child is the subject, as in "Boy in White Blouse." When she takes on the portraiture of older persons, as in the case of Mrs. Menton or the "Portrait"—a likeness of the artists's father, who is a distinguished architect of Pittsburgh—she becomes severe and restrained. However, in these two portraits she has achieved something vital and vivid. Modern French influence at times shows.

This artist presents a simple statement of nature with no apparent difficulty or effort because she sees so clearly and selects with judgment. Her painting is persuasive and convincing. There is nothing complex or involved to understand about it, but that does not mean much thought, experience, and an abundance of self-criticism have not entered into it. She has achieved a method of expression that is her very own, won the hard way but truly the manifestation of a calm, serene, and knowing artist.

J. O'C., Jr.

A NEW TECHNOLOGY LIBRARY FUND

WHEN Andrew Carnegie gave \$10,000 to establish Carnegie Library's Technology Department in 1897, he acted without a precedent. No public library of that time had recognized the importance of providing specialized services to the local industries.

Mr. Carnegie's judgment received the most significant type of endorsement late in 1944, when the Pittsburgh Section of the American Chemical Society established its Technology Library Fund. This Fund will be used to purchase technical books and periodicals that cannot be bought from the Library's regular budget.

The Chemical Society proved its own sincerity of purpose by launching the Technology Library Fund with an allotment of \$2,000 from its own treasury. Individuals and the industrial corporations of the Pittsburgh area were then invited to contribute. Now, at the end of the active campaign, the fund stands at \$66,195.

The Library would have welcomed this aid from any source, but it is especially gratified that it comes from those who use the Library and are best able to judge the value of technical library service. Chester G. Fisher, president of the Fisher Scientific Company, acted as chairman of the campaign committee; its membership included the directors of research of many of Pittsburgh's most prominent industrial companies.

In most of its phases, Carnegie Library's services are popular in nature. In science and technology, however, much of its resources are at the research level, and are used by scientists and engineers who are seeking new products and processes for industry. The prefaces of many scientific and technical books, and of graduate theses, carry the author's acknowledgment of the aid which he has received from the collections and staff of the Technology Department.

Throughout its existence it has been the primary purpose of the Technology Department to serve local industries. Materials relating to every field of science and technology are purchased, but the size of the various collections is in proportion to their interest in this locality.

Much of the strength of the Department springs from its early establishment. Most of its files of journals and transactions begin with the first issue.

The scope and extent of technical literature has been so greatly expanded during recent years, that the Department has been unable to purchase a sufficient number of the newer publications. *Chemical Abstracts* is the first tool of the chemist. It now abstracts four thousand journals in all languages, but the Library is able to subscribe for less than a thousand of them.

Many of these newer books and periodicals will be purchased from the Technology Library Fund. In general, the Fund is to be expended for the more unusual and less frequently used materials which need not be in every library. The Technology Department will thus become a pool of research literature, supplementing the other technical libraries of the district. The Fund is to be administered by a committee representing the Pittsburgh Section of the American Chemical Society, the University of Pittsburgh, Carnegie Institute of Technology, Mellon Institute, and Carnegie Library of Pittsburgh.

E. H. McClelland, head of the Technology Department since 1907, will represent the Library on the committee. It is largely due to his wide knowledge of technical literature and sources of information that the Department can claim the allegiance of the Pittsburgh Section of the American Chemical Society and the many local industries which contributed to the fund.

R. M.



THE GARDEN OF GOLD



THE reports made in the Garden of Gold vary from month to month. Naturally in some months there is much more to report than in others and at this time of the year, as Spring comes on, it seems our friends have been particularly generous.

It is a great pleasure to report a most substantial gift by the Aluminum Company of America in the amount of \$200,000 to go toward a professorship of light metals. This project, of course, is one in which so many are interested and the needs of war have demonstrated the national importance of study and research in fields such as this. It follows the pattern of other such foundations for the maintenance of work in subjects in which the donors are interested and which come within the scope of the work carried on at Carnegie Tech. In addition to the donation itself, it will bring in 1946, as our readers must know, the sum of \$400,000 more from the Carnegie Corporation of New York for the general Endowment Fund of Carnegie Tech.

The Printing Scholarship Fund, recipient of many generous gifts in the last few months, was increased by a subscription of \$5,000 from the firm of Judd & Detweiler, Inc., which is to be designated as the George H. Judd Printing Scholarship Fund. Judd & Detweiler, Inc., are the printers of *The National Geographic Magazine* published by The National Geographic Society and it is a pleasure to have their recognition of the outstanding work done by Tech's Department of Printing.

A check for \$500 also has been received from the Carnegie Institute Press, evidence of the interest and sympathy of those who work in the Press for the Department of Printing at Tech.

Three other gifts for this Fund were received this month: \$12 from Private First Class Irving A. Norgren, E'37;

\$10 from Elmer A. Normandeau, I'29; and \$5 from Private Jerome N. Schiff, E'43.

The Norman Apell Memorial Scholarship Fund was instituted in March with a gift of \$1,280 from friends of Norman Apell, A'44. The son of Mr. and Mrs. Harold J. Apell of Mount Vernon, N. Y., Sergeant Apell was wounded in action in France on August 28, 1944 and died a short time later. He had completed three years at Carnegie Tech Drama School and had enlisted in the Reserves when he was called for service in May 1943. Sergeant Apell took his basic training at Camp Wheeler, Ga., remaining there until June 1944 and serving the last eight months of that time as instructor in infantry arms. He was sent overseas in July 1944 and spent only a short time in England and Scotland.

The Chemistry Department Research Fund received several anonymous gifts amounting to \$333 in addition to those from Robert W. Ortmiller, E'22, and Henry Seaman, E'28.

The James Franklin Tilbrook Aviation Library and Museum Fund, for the establishment of which Mr. and Mrs. Gilmore L. Tilbrook have already contributed \$25,000, received an additional gift from Mrs. Tilbrook of \$500. Mr. Tilbrook will be remembered as a graduate of the 1915 Engineering Class and one who has taken a generous interest in the upbuilding of the Endowment Fund. Both Mr. and Mrs. Tilbrook have for many years been actively interested in the aviation industry and all things connected with it, and it is a pleasure to record this additional gift from Mrs. Tilbrook.

The Class of 1917 Engineering Scholarship Fund received contributions from three E'17 alumni: \$100 from William H. Norris, \$10 from Anthony J. Kerin, and \$18.75 from Wilmer Stine.

Gifts to other special funds during March include the following:

An anonymous contribution of \$40 to the Fine Arts Aid Fund.

From Allan Jack Hoenig, E'42, \$10 for the John H. Leete Memorial Scholarship Fund.

Two dollars for the Marks Memorial Scholarship Fund from Harry R. Logiodice, I'30.

For the Hower Memorial Fund, \$15 from Clifford G. Shull, E'37.

The final payment of proceeds from the Women's Endowment benefit bridge and bazaar has been received in the amount of \$309.27 plus a \$25 United States Savings Bond. Also, Kappa Kappa Gamma sent a check for \$25, this bringing the total contributed by the women in their 1946 Endowment Fund campaign to \$14,452.77.

An anonymous gift of \$200 and payment of \$132.83, principal and interest from the Augusta Fisher Porter Estate, were both designated for the general Endowment Fund.

Among alumni contributing to the general fund this past month have been E. H. Holzworth, E'18, \$50; Lieutenant J. Robert Britton, E'30, \$20; Mr. and Mrs. Roy A. Garbett, E'24 and A'25, and Roger A. Newburger, E'40, both \$10.

The story behind the \$50 sent by the Carnegie Clan of Buffalo for the 1946 Endowment Fund, as reported to Alumni Secretary John L. Elliott, suggests a rollicking evening of give-and-take. The Buffalo Clan challenged the Carnegie Clan of Rochester, N.Y., to a radio contest entitled "Quiz of Two Cities," which was broadcast over Stations WBEN, Buffalo, and WHAM, Rochester, on Sunday, March 18. The Buffalo team, composed of Dorothy Jean Thompson, A'43, Arthur L. Beck, E'22, and Mr. and Mrs. John V. Landau, I'33 and A'34, won the contest and turned their prize money over to their Alma Mater.

The Carnegie Chapter of Phi Kappa Phi has opened its campaign to raise \$10,000 for the Endowment Fund. This

sum will establish scholarship awards in memory of the late Roscoe M. Ihrig, Director of the Division of General Studies, and the late Leo T. Lawler, Associate Professor of English and Secretary of the Division of Humanistic and Social Studies and of the Social Relations Program Committee, both past presidents of the Chapter. The income from the gift will be used for three awards made for the senior year, one in the College of Fine Arts, one in the College of Engineering, and one in the Margaret Morrison Carnegie College. The Carnegie Chapter of Phi Kappa Phi has already contributed \$600, leaving \$9,400 to be raised. Contributions are being received by Jeanne Hartman, Secretary of the Chapter, Room 254-C, Industries Hall, Carnegie Institute of Technology.

Carnegie Museum has been the recipient of several very generous contributions during the past few months. Thomas A. Mellon gave \$4,000 to the Museum during January in anticipation of an expedition to British Columbia to be conducted by Arthur C. Twomey next month. Both John B. Semple and George H. Clapp, trustees of the Institute who have for many years generously supported its work, contributed \$1,000 in February for the expedition to Labrador in which J. Kenneth Douth and W. E. Clyde Todd are just now engaged. Early in April a friend who prefers to remain anonymous presented \$1,500 for paleontological explorations in western United States this summer and had earlier contributed \$500 for the use of the Director of the Museum.

A recapitulation of payments and pledges for the 1946 Endowment Fund shows \$2,619,356.76 paid and \$544,333 pledged, or a total of \$3,163,689.76. The Carnegie Corporation of New York in 1921 made the offer to match a \$4,000,000 Endowment Fund two-for-one by adding \$8,000,000 for a total new endowment of \$12,000,000. June 30, 1946 was set as the time limit. The balance remaining yet to be raised amounts to \$836,310.24.



"THE PLAY'S THE THING"

Reviewing the Department of Drama's Presentation of
Molière's "The Miser"



BY AUSTIN WRIGHT

Associate Professor of English, Carnegie Institute of Technology



THE March play in the Little Theater was a lively production of Molière's *The Miser*, translated and adapted by Marquis Patterson and directed by him in partial fulfillment of the requirements for

the degree of Master of Fine Arts in Drama. Mr. Patterson, who also designed the attractive period setting, has been one of the leading actors in the Department of Drama for the past two years, and with this production he gave evidence of a truly remarkable versatility which would seem to presage success in whatever department of the theater he may choose for his career.

Molière's *L'Avare* is based upon Plautus' *Aulularia* to about the same extent that Shakespeare's *The Comedy of Errors* is based upon the Roman author's *Menaechmi*. The chief character, Harpagon, is a miser whose avarice dominates his existence and deadens him to every human emotion except fear of losing his wealth, and suspicion and hatred of those who are in position to endanger it. He plans to marry his extravagant son Cléante to the first available woman who will provide the requisite dowry; to match his daughter Elise with the elderly but wealthy widower M. Anselme, who proves himself an ideal suitor by his willingness to accept his bride without a dowry; and to take for himself the young and charming but, alas, penniless

Mariane, whom his son secretly adores. That these plans are frustrated is hardly cause for surprise, but modern audiences, at least, feel something akin to embarrassment when the discomfiture of Harpagon is brought about by one of the most preposterous denouements in dramatic literature: Valère, the young man who serves Harpagon as steward in order to court Elise and is falsely accused of stealing his master's gold, turns out to be the brother of Mariane, and the reunited brother and sister prove to be the long-lost children of rich M. Anselme!

Mr. Patterson's version of *The Miser* seemed to many who saw it one of the most entertaining productions witnessed at Tech in years. Every trick was played to extract fun out of the lines and situations, and the pace was so rapid and the mood so gay that the evening passed all too quickly. Aside from some brief scenes in *All's Well That Ends Well*, there has been almost no comedy in the Little Theater this year, and Mr. Patterson's exuberant fun-making was probably all the more welcome for that reason.

I must confess, however, to a feeling of uneasiness which has troubled me ever since I saw the opening performance of *The Miser*, a feeling not unlike that when one forgets where he left his umbrella—and is not even quite sure that he was carrying an umbrella! I had never seen a Molière play performed, and my knowledge of his works is confined largely to memories of an excellent college course under one of the great Romance scholars and teachers of the country; but I had a definite impression of the author of *Tartuffe* and

Le Misantrophe and even *Le Bourgeois Gentilhomme* as a dramatist of rare wisdom and exceeding subtlety, endowed with a keen insight into human nature and an almost Shakespearian power of fathoming and portraying the foibles and hypocrisies and eccentricities of mankind. Yet in the Tech production of *The Miser* there was nothing to suggest that Molière is such an author. Should there have been? Goethe wrote of the "extraordinary grandeur" of this play, and considered it in a high degree tragical. Harpagon has been compared with Shylock, that tragic figure who for all his lust for vengeance makes a tremendous appeal for audience sympathy and who, whatever else may be said of him, is never funny! Critics speak of *The Miser* as a "searching" comedy, and praise it as a "veracious portrayal of humanity." One feels that they must be speaking of a different play by the same title!

Even a careful reading of the original work does not solve the mystery. *L'Avare* seems to me a transparent, straightforward comedy, bordering much of the time upon the farcical. Subject to contradiction by experts in French drama, I am so rash as to assert

the belief that no production of the play could make it seem worthy of ranking with the greater comedies of Shakespeare or even with the best work produced by the Restoration dramatists in England. Harpagon is the embodiment of avarice—and nothing more. The other persons in the play are merely stock characters, of little interest in themselves, serving only to bring out the idiosyncrasies of the central figure. Some of the supposedly comic dialogue grows tiresome, for example, the misunderstanding between Valère and Harpagon when the steward is speaking about Elise, and Harpagon thinks he is speaking about the stolen gold. This sort of confusion is amusing for a brief time, but not when, as in this case, the misunderstanding persists for nearly five minutes by actual count.

All this is not to say that the method of approach followed in the Tech production of *The Miser* is the only one possible. I must confess that there seemed to me an unwarranted sacrifice of subtlety for fun and caricature of the broadest sort, an insistent straining for humorous effect which to some degree defeated its purpose. The most obvious example was the behavior of Harpa-



STUDENT ACTORS IN A SCENE FROM MOLIÈRE'S "THE MISER"

gon's servants, who stumbled and rolled about the stage like playful puppies and exhibited a degree of doltishness and incompetence sufficient to make modern housewives feel unexpectedly complacent with regard to the servant shortage. I am not sure that such Punch-and-Judy acrobatics really constitute adult entertainment. Less extreme instances abounded, none important in itself perhaps, but all adding up to an imposing total. There was the action in the opening dialogue; for instance, when Valère and Elise kiss at intervals in her story until Elise rises unexpectedly and Valère's next kiss falls upon the air. There were the endless rolls of manuscript, reaching to the floor, from which La Flèche reads the list of exactions made by the money-lender. There was the behavior of Master Jacques when, in reporting to Harpagon the gossip which is current about the miser's habits, he points out persons in the audience and announces, "That man says . . ." There were the shenanigans of Harpagon when he learns of the robbery. There was the elaborate by-play when Harpagon tries to save the refreshments ordered by the extravagant Cléante from being consumed by the company. There were the protracted pauses when Master Jacques changes costume from coachman to cook and back to coachman. There were the grotesque sleepiness and inefficiency of the magistrate summoned to ferret out the criminal. Of course it would be unreasonable to ask that any play, let alone one that verges upon farce, be performed without a certain amount of gratuitous stage business, but there seemed to me a little too much of the bludgeon about the method of getting laughs, and not enough of the rapier.

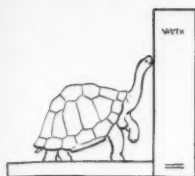
It is only fair to say, however, that in this view I am apparently in a decided minority. Even Arbuthnot, of whose moral support I had felt certain, is not of my opinion. And there is no doubt that without the rollicking antics devised by Mr. Patterson and

entered into with exuberance by the players, the production would have been far less amusing.

With the exception of the tendency toward burlesque, upon which perhaps I have already dwelt too long, the production seemed to me wholly worthy of praise. The difficult role of Harpagon, a part created by Molière himself, was well sustained throughout. The actors and actresses who played the other roles were a handsome, merry crew who looked charming in their seventeenth-century costumes and whose gay, spirited performances were immensely appealing. Outstanding were Harpagon's pleasant but vain and rather characterless children, the products of his unfortunate theories of parenthood; La Flèche, the impish servant and confidant of Cléante, played with an abandon and a heartiness that were very attractive; Master Jacques, the cook-coachman who furnishes much of the best humor in the play and also, through his genuine interest in his mistreated horses and his selfish master, the only touch of pathos; and Frosine, the adventuress who has one excellent scene with Harpagon in which she flatters the old man, cajoles him, hoodwinks him—but meets with utter failure when she attempts to wheedle money from him. Frosine's shrewd demonstration to Harpagon that Mariane will really bring him a large dowry through the extravagances she will not be guilty of is probably the wittiest passage in the play.

The director made skillful use of the various levels of the stage, moving the characters from one level to another in a way to provide welcome variety and often to heighten the comic effect.

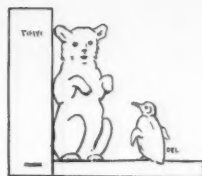
Finally, Mr. Patterson, the translator, adapter, stage designer, director, deserves particular commendation for his clever translation. He has caught the spirit of Molière admirably and has written easy, natural dialogue which he has succeeded in making colloquial and modern without sprinkling it with painful anachronisms.



THE SCIENTIST'S BOOKSHELF

By M. GRAHAM NETTING

Curator of Herpetology, Carnegie Museum



BLACK WIDOW: AMERICA'S MOST POISONOUS SPIDER. By RAYMOND W. THORP AND WELDON D. WOODSON. Chapel Hill: University of North Carolina Press. 1945. 222 pp., 24 illustrations. \$3.00. Carnegie Library call no. 595.4 T41.



POPULAR interest in some groups of animals, such as birds and butterflies, reflects genuine liking. Much of the curiosity about spiders, on the contrary, may be engendered by the fascination of abhorrence.

Biologists welcome any interest in animals, regardless of how it is fostered, since curiosity stimulates learning. Only sound knowledge can transmute nebulous fear of an entire group into casual tolerance of economically beneficial species of that group, and informed avoidance of the minority of harmful forms. We all need to learn more about spiders, whatever our personal attitude toward them may be, and this volume provides the first convenient summary of the extensive literature dealing with the much-publicized black widow.

This villainess is not introduced abruptly, for the opening chapters treat more general matters. "Spider Lore and Legend" is followed by a discussion of "Tarantism," a malady once attributed to spider bites, which was especially prevalent in seventeenth century Italy. Unlike many early therapeutic measures, the "cures" for this affliction were pleasurable—music and dancing. Taranto, a center of the malady, gave its name to the local wolf spider, tarantula, and to a sprightly dance, the "tarantella."

Today the word tarantula is extensively misapplied. It has become the popular name for the giant crab spiders, which often "bum" a ride to our shores ensconced in banana stalks, and, by extension, the term for almost any large, hairy spider. Generalization about the many different spiders called tarantulas is unwise, but it is safe to say that most of the species are more greatly feared than their potentialities warrant.

Next, the authors survey the worldwide distribution and importance of the genus of spiders to which the black widow belongs. The black widow has close relatives, remarkably similar in appearance, habits, and venomous qualities, on every continent. These arachnid Borgias differ in popular and technical names, in distribution, in their red markings, and in certain personal details best left to the eyes of prying scientists.

The next seven chapters, gruesome in general tone, but important in factual content, comprise reports of early spider-bite cases in the United States, recent medical reports, summaries of experiments, and recommendations for treatment. In deference to the sensibilities of some of my readers, I shall skip over these chapters, but commend them to the careful reading of all who wish to know the symptoms of a black-widow bite.

"The first recorded spider bite in America occurred on September 3, 1726." Beginning with this case, and ending with 1943, a 218-year period, the authors have obtained records of 1,291 cases in the United States, 55

resulting in death. Obviously, many more bites have occurred; many victims recovered without medical aid; some others, at least until recently, were treated for a variety of ailments, without suspicion of arachnidism, or spider poisoning. In fact, general recognition by physicians of the importance of spider bites dates from 1926, when Dr. Emil Bogen, of Los Angeles, published an epochal report. The early awareness of California physicians must be responsible, in part, for the large number of cases known to have occurred in this state, 578 of the total of 1,291. Pennsylvania is credited with only three cases, one of which terminated fatally.

The question of how dangerous the black widow actually is has occasioned heated controversy. Certain often unconsidered biological facts make this controversy understandable. In the first place, the tiny fangs are only about one-fiftieth of an inch in length, and may not pierce the skin. Second, the spider can bite without injecting any poison whatever, or can inject varying amounts of venom from one, or both, venom sacs. Third, male black widows start life with smaller venom glands than do females, and become almost harmless when mature. In fact, males throughout life are incapable of serious injury to man. Females, on the other hand, become more dangerous with age, for not only do their venom sacs increase in size, but the poison actually increases in potency, a matron having venom which is more toxic, drop for drop, than that of a rattlesnake. The authors discuss other factors which affect the severity of a spider bite, and conclude: "The black widow spider has, as we have proved, a venom supply at her command sufficient, in its entirety, to cause intense suffering in any human being. Complications or physical weakness may bring death to the victim."

The final seven chapters deal with such interesting matters as the life cycle, altitudinal and geographic distribution, diet, choice of abodes, and enemies of the black widow. We learn that the

female has long, wiry legs, a shiny black coloration, and a bulbous abdomen, marked on its lower surface with an hourglass-shaped mark of red, orange, or yellow. She builds a coarse, irregular web in almost any dark corner, but is notoriously addicted to privies. During her life span of a little more than a year, she may spin and fill a total of nine egg sacs, each containing from 25 to 1,000 eggs. Although strictly carnivorous, she needs no red points, the lifetime consumption of one individual being "240 domestic flies, 3 grasshoppers, and 2 garden spiders."

Artificial control methods have not been markedly successful thus far. Spiders are not insects and most insecticides do not kill them. Naphthalene deters black widows, but one of the most effective eradicators is a fly-swatter in the hands of an experienced adult. Natural enemies can control the black widow much more efficiently and cheaply, but we must recognize and protect these allies. The mud-dauber wasp, for example, destroys so many of the spiders that its many-celled nest under the eaves is one of the best forms of spider insurance. In California an alligator lizard relishes both these spiders and their egg sacs, but this lizard falls prey to the house cat.

This book is admirable in format and content, and the illustrations are clear and well-chosen. Unfortunately, it is not equally meritorious from a literary standpoint. For example, the authors appear to be as much afraid of many harmless adjectives as some of their readers are of innocuous spiders. Their avoidance of "generic" and "specific" results in frequent repetition of such incorrect and unhappy combinations as "genus name" and "species name." Local readers have little cause to become concerned over the black widow "menace." The spiders live in our countryside, but they shun modern plumbing, and they use the weapons with which nature endowed them much more judiciously than we use those which we have invented.

CARNEGIE MAGAZINE

THE EDITOR'S DESK

Our readers will remember an account of the meeting of Colonel Homer Saint-Gaudens and Guillaume Lerolle in France, given in the November issue of *CARNEGIE MAGAZINE*. The latter, a resident of Paris for many years and European agent for the Department of Fine Arts, had been lost sight of during the German invasion of France. Just recently the following letter has come from him to Fine Arts Acting Director John O'Connor, Jr.

It was a charming surprise for me to find in this morning's mail the old familiar envelope of the *CARNEGIE MAGAZINE* of November 1944, in which I read Homer's description of how he found me.

You should have seen the excitement when his jeep stopped at the gate and we saw the Colonel step out of it.

It had not been so long before, that the house had been occupied by German officers who, after some discussion and pleading, had authorized us to stay in the gardener's lodgings. We were nine persons in two small rooms. What a relief it was when, on August 15, we saw the Germans pack and go! On the 16th the first American troops were seen. We were still so happy to be freed! Then Homer arrived!

The excitement has now quieted down and the fight goes on, grimmer than ever, to push back the Germans where they belong—after their advance in Belgium and Luxemburg has been stopped.

Homer comes occasionally to my place in Paris for a little friendly chat and for some heat. He is in good health and seems much interested in his work.

I didn't know letters could be sent over the Atlantic but, seeing that *CARNEGIE MAGAZINE* has reached me, I suppose this will reach you, together with my best wishes for a happy New Year.

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A letter from Colonel Homer Saint-Gaudens, dated March 19, reads in part as follows:

The weather has been something to do something about. But now there are buds on the lilac bushes. I was peeping through some the other day on the river side of an old beer garden on the banks of the Rhine. There was not a military soul in sight—not even me. It was different with the civilians. Women were hanging out washing on the deck of a canal boat down the bank and some children had tied C-ration cans to the soles of their feet and were trying to walk on them. Some artillery was firing over our heads and there would be a machine gun burst now and then. Nobody paid much attention.

The runner who had guided me suddenly asked when the next International would be held!

He came from Carnegie Tech.

Pictureque as this description is, we wish the Colonel had given the name of his Tech friend.

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